

STATEMENT BY
THE DIRECTOR OF CENTRAL INTELLIGENCE
BEFORE THE
SUBCOMMITTEE ON ENERGY AND MANPOWER
HOUSE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE
Monday, 25 April 1977
1:30 p.m.

In preparing our analysis we drew on a broad spectrum of energy-related disciplines such as geology and petroleum engineering which have no fixed home in either government, business or academia. And, of course, in some very important areas we have access to material not available to other energy forecasters. As a matter of course we consult frequently with other US government agencies including FEA, State, Interior and ERDA and have done so over the many years we have been doing in-depth analysis on the international energy scene. As such, publication of the report represents a normal part of our analytical production process. FEA and ERDA have been fully briefed on our assessment.

April 1977

DCI CONGRESSIONAL BRIEFING

THE INTERNATIONAL ENERGY SITUATION

I. Mr. Chairman, CIA's economic analysts have just completed about a year's work in forecasting world oil demand over the next decade or so. I would like to highlight the results for you. I think that you will find it both interesting and sobering.

II. In brief, our conclusion is this: In the absence of greatly increased energy conservation, projected world demand for oil will approach production capacity by the early 1980s and substantially exceed capacity by 1985.

Graphic:
Supply/
Demand Gap)

A. In these circumstances, there will be pressure on prices to ration available supplies. Saudi Arabian production will be inadequate to keep prices down.

B. Our forecast of oil supply and demand through 1985, though broadly resembling other official

Energy - 1

and private forecasts, is more pessimistic than theirs.

III. Our pessimism is based on our estimate that the USSR will change from an exporter to a substantial importer of oil in the early 1980s; on our estimate that non-oil energy supplies can not be counted on to resolve the problem between now and 1985; and on continued growth in demand.

(Graphic:
Soviet Crude
Production)

- A. As our Soviet estimate is crucial to our analysis, I would like to go into it in some detail.
- B. Soviet oil production will soon peak, possibly as early as next year and certainly not later than the early 1980s.
 - 1. The maximum level of output is likely to be between 11 and 12 million b/d.
 - a. The current level (1976) is 10.5 million b/d.
 - 2. Maximum levels are not likely to be maintained for long.

- C. The Soviets have a problem of production in that those fields that account for the bulk of Soviet production are experiencing severe water encroachment. As a result, increasingly large quantities of water must be lifted for each barrel of oil produced.
- D. Unlike the US, which has long restricted production for reasons of conservation and profit, the USSR favors maximized production.
 - 1. Short-term goals are considered floors, not ceilings, and rewards are given for exceeding them.
 - a. Under these conditions, Soviet production has expanded much more rapidly than that of the US, resulting in:
 - Overproduction from existing wells and fields.
 - New production requirements that will soon run far beyond the Soviet oil industry's capability.

- E. Soviet proved reserves are probably in the range of 30 to 35 billion barrels--roughly comparable with those of the US--but development of Soviet reserves in the Arctic, East Siberian, and off-shore areas is at least a decade away.
- F. Thus, during the next 8-10 years, almost all Soviet output will have to come from existing producing areas.
1. Current Soviet plans call for holding aggregate output nearly constant west of the Urals, while doubling production in West Siberia.
- G. Because of a variety of problems, we believe that output west of the Urals will decline because production is coming increasingly from greater depths and from more intensive exploitation of already tapped reservoirs. Production from Siberia will fall far short of doubling because of inhospitable climate, difficult terrain, and vast distances greatly complicating operations.

(Graphic:
Soviet Oil
Fields)

1. The main Soviet oil field at Samotlar reach peak production in the next year or so and will hold peak levels for no more than four years.

H. The USSR does not have the drilling capability to pursue adequate development and exploration programs simultaneously.

1. Although the Soviets have almost as many active rigs as the US, the Soviet effort amounts to only one-fifth that of the US in terms of meters drilled.

- a. In 1971-75, the Soviet Ministry of the Oil Industry drilled a total of about 52 million meters.

- b. In 1975 alone, the US drilled 53 million meters.

2. Even with maximum effort, the Soviets will not come close to the 1980 goal of drilling 75 million meters called for by their current five year plan.

Energy - 5

(Graphic:
USSR Fluid
Lifting)

- I. Even more serious than the drilling problem is the fluid lifting problem created by their practice of massive water injection within and along the edges of each oil field.
 1. Although massive water injection can boost production for a time, eventually the water will find a channel of least resistance and break through to the oil-producing well, leaving behind much oil in the less permeable portions of the formation.
 2. When the wells begin to show water in large quantities, the natural flow will usually stop and the wells must be put on the pump.
 3. In this case, however, conventional pumping equipment cannot be used; special high capacity submersible pumps are needed because much greater volume of fluid (oil plus water) must be lifted.
- J. There is no question that new fields--some quite large--will eventually be discovered.

1. However, given the rapid rate of depletion of existing fields and the technical difficulties associated with exploration and exploitation in frontier areas, we doubt that the new discoveries will come on stream rapidly enough to do more than temporarily arrest the rapid slide of Soviet output.

K. We estimate that in 1985 the USSR and Eastern Europe will need net imports of 3.5 to 4.5 million b/d.

IV. Our forecasts of energy production outside the Soviet bloc do not differ greatly from those of other government agencies, companies, and independent consultants.

(Graphic:
Non-OPEC
Production)

A. Mexican production, which may be as high as 4.5 million b/d by 1985, will be very welcome but will not significantly alter the essentially gloomy world energy picture.

B. The same is true of Egypt. Egyptian oil potential is probably higher than was originally believed. We have taken this into account in our forecast.

- C. Over the years we have extensively researched the energy potential of the People's Republic of China; we have concluded that China will no longer be a net exporter by 1985.
- D. By 1980, growth in North Sea supplies will be slowing, Alaskan output will have stabilized but the underlying supply problem will be masked during the next few years because of the greatly increased oil production from the North Sea and Alaska.
- V. Between 1979 and 1985, however, increasing world demand and stagnating oil production in the major consuming countries will result in increasing reliance on OPEC oil.
 - A. By 1985, we estimate that demand for OPEC oil will reach 47-52 million b/d. (Currently, it is about 32 million b/d.)
 - 1. Even if all other OPEC states produce at capacity, Saudi Arabia will be required to produce between 19 and 23 million b/d if demand is to be met.

2. This is well above both the present Saudi capacity of 10 to 11 million b/d and the projected 1985 capacity of 18 million b/d.

3. If the Saudis follow through on current expansion plans, their excess productive capacity would be exhausted by 1983.

VI. Thus, although Saudi Arabia has the oil reserves to meet increasing demand between now and 1985, we doubt the Saudis will be able to increase production sufficiently.

VII. Non-oil energy supplies cannot be counted on to relieve the problem appreciably between now and 1985.

A. Given the long lead time required, we do not believe nuclear power plants will contribute more than the equivalent of 6 million b/d to new fuel supplies by 1985.

B. Natural gas supplies outside OPEC will increase little during the period. Increased output in the North Sea will probably be offset by declines in the US and Canada.

C. Coal production will expand in the US, but not
in most other Free World countries.

IX. This analysis indicates that if large-scale conservation does not suppress demand, prices will have to rise in order to ration available supplies.